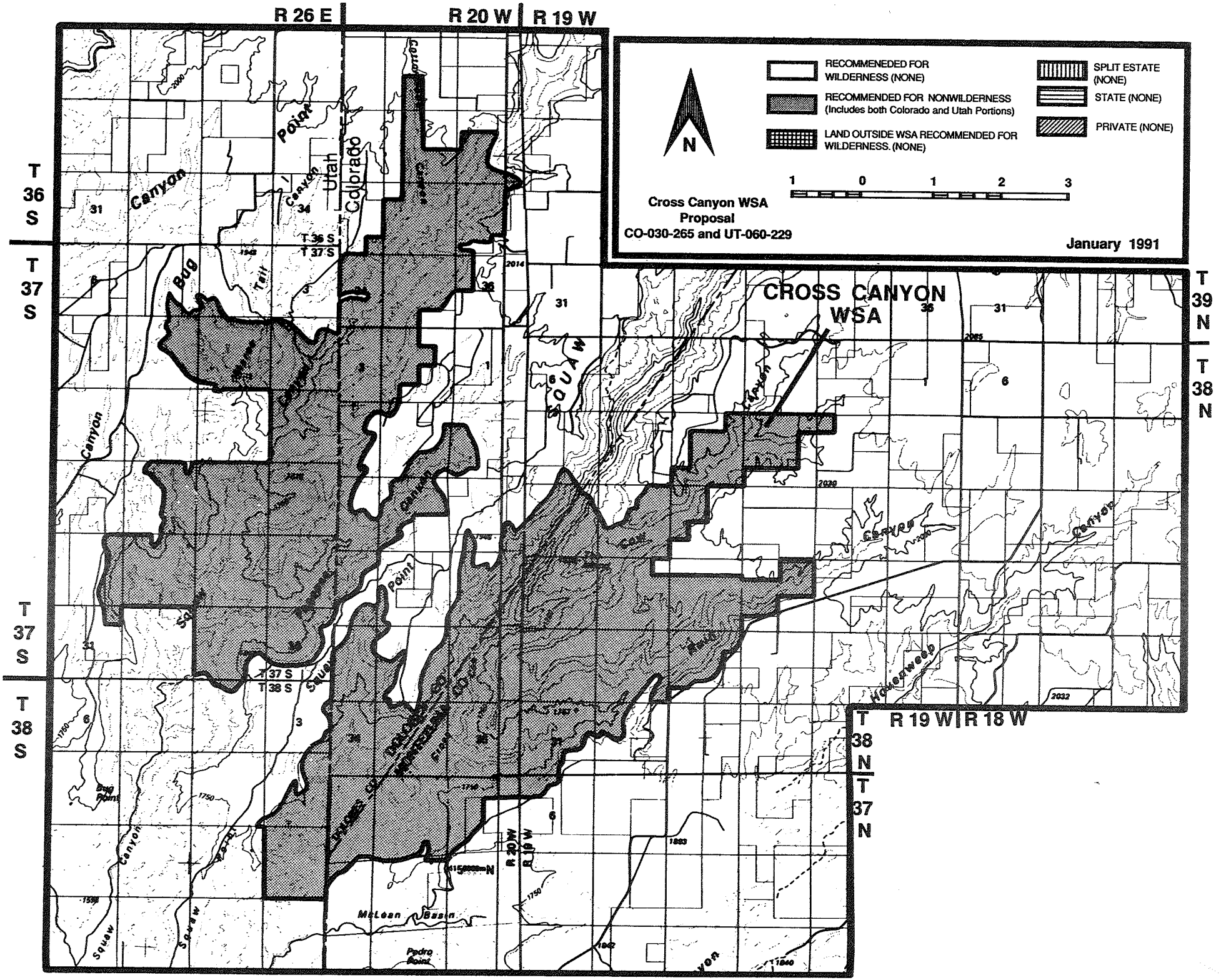
Cross Canyon

Wilderness Study Area


R 26 E
R 20 W
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R 19 W
R 18 W
T 36 S
T 37 S
T 37 S
T 38 S
T 39 N
T 38 N
T 38 N
T 37 N
N
RECOMMENEDED FOR WILDERNESS (NONE)
RECOMMENDED FOR NONWILDERNESS (Includes both Colorado and Utah Portions)
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS. (NONE)
SPLIT ESTATE (NONE)
STATE (NONE)
PRIVATE (NONE)
1 0 1 2 3
Cross Canyon WSA
Proposal
CO-030-265 and UT-060-229
January 1991
CROSS CANYON WSA
Utah
Colorado
Bug Point
Squaw Point
McLean Basin
Pedro Point
Hackberry
Canyon

CROSS CANYON WILDERNESS STUDY AREA

THE STUDY AREA: 12,588 acres

The Cross Canyon WSA (CO-030-265 and UT-060-229) is located in Dolores and Montezuma Counties, Colorado (11,580 acres) and in San Juan County, Utah (1,008 acres). The area is approximately 14 miles southwest of Cahone, Colorado, about 1 mile southwest of Lowry Pueblo Ruins National Historic Landmark, and 5 miles north of Hovenweep National Monument. There are no inholdings in this WSA; all 12,588 acres are BLM (see Table 1). The area centers on the Cross, Cow, and Ruin Canyon system. The boundary extends southwest, down-canyon to the point where two roads visually impact the area. Boundaries extend north and east, up-canyon only to the point in each of the three canyons where roads, mines, private agriculture and human activity are encountered. The WSA is surrounded by a mixture of public and private land. The area is shown on the map.

The topography of the WSA includes portions of three main canyons (Cross, Ruin, and Cow), which are the topographic continuation of the Cahone Canyon WSA, separated by previous oil and gas activity and uranium mining and exploration. The perennial streams of Cow and Ruin Canyon enter the WSA at elevations of between 6,200 and 6,400 feet, while Cross Canyon stream enters at 5,560 feet. The canyon/stream systems join and leave the WSA as one perennial drainage at 5,150 feet. The relatively flat plateau through which these canyons are cut has a gentle southwest down-tilt from its 6,500 feet elevation at the northeast boundary of the WSA. Numerous ledges, rock outcrops, and cliffs are exposed in the stair-stepped canyons which range in depth from 300 feet to 900 feet. Vegetation is thick pinyon pine-juniper woodland on the slopes and canyon rim, with sage parks and riparian growth along the canyon bottom. Also present in Cross Canyon WSA are numerous

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

TOTAL ACREAGE	
WITHIN THE WSA	ACRES
BLM (surface and subsurface)	12,588
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	12,588
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	12,588
Split-Estate	0
Total BLM land not recommended for wilderness	12,588
In-holdings (State, Private)	0

Source: BLM File Data

TABLE 1 (Continued)
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

UTAH	
WITHIN THE WSA	ACRES
BLM (surface and subsurface)	1,008
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	1,008
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	1,008
Split-Estate	0
Total BLM land not recommended for wilderness	1,008
In-holdings (State, Private)	0

COLORADO	
WITHIN THE WSA	ACRES
BLM (surface and subsurface)	11,580
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	11,580
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	11,580
Split-Estate	0
Total BLM land not recommended for wilderness	11,580
In-holdings (State, Private)	0

Source: BLM File Data

and significant archaeological sites related to the Anasazi culture--communities of prehistoric farmers who lived in earthen and stone structures, 6 to 20 centuries ago.

The WSA was studied under section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the San Juan/San Miguel Planning Area Final Wilderness Environmental Impact Statement (EIS) published in November 1990. Three alternatives were analyzed in the EIS: all wilderness (12,588 acres), partial wilderness (12,272 acres--the result of 933 acres deleted and 617 acres added from outside the WSA boundary), and a no wilderness alternative which is the recommendation of this report.

RECOMMENDATION AND RATIONALE

0 acres
(recommended for wilderness)

12,588 acres
(recommended for nonwilderness)

The recommendation is to not designate Cross Canyon WSA as wilderness and to release the area for uses other than wilderness. The all wilderness alternative is the environmentally preferable alternative since its implementation would result in the least change to the natural environment over the long term.

The primary reason for the no wilderness recommendation is the existence of 36 oil and gas leases dating from before the FLPMA of 1976 (pre-FLPMA oil and gas leases). Pre-FLPMA leases are not subject to the regulations that FLPMA created and therefore lease holders could develop these leases by building a road to, drilling from, and occupying a drill pad, all on the ground-surface of the lease. These 36 leases comprise 8,875 acres or 71 percent of the total acreage in the WSA. These 36 leases and much of Cross WSA are in the Sand Canyon Known Geologic Structure (KGS); an area of known production of oil and gas. The leases are consolidated by unit agreements with producing leases outside the WSA - "held by production" - they will not expire as long as other wells in the unit agreement are producing. Even though the leases are in a KGS and extensive seismic exploration has been done in the WSA, no development of these leases has occurred, even in years of high oil and gas prices. It may be that even if oil and gas are present, profitable recovery is not possible, but it cannot be assumed that these leases will never be developed.

Because the leases are pre-FLPMA, and "no surface occupancy" (NSO) stipulations cannot be imposed, management to preserve the wilderness characteristics of Cross Canyon WSA would be complex, difficult, and expensive. It is estimated that a total of 51 acres of surface disturbance in 1 to 2-acre scattered parcels (drill pads plus access roads) would occur if all 36 leases were developed. Some of the drill pads might be located within the canyon itself which would visually impact a large area, not just the directly disturbed small parcels. Solitude, naturalness, and opportunity for primitive and unconfined recreation would all be impacted in a large portion of the WSA because of the sights and sounds of well site construction.

Under the current management plan, BLM does require that there be no long-term visual impairment of the area by lease development. Because of the rugged, rocky topography and old growth pinyon-juniper woodland, total and acceptable reclamation can be a long and expensive process requiring great effort by both the lease holder and BLM. As a result of these stringent restrictions, the lease holder may find it to be more economical to use directional drilling (slant drilling) from outside the WSA boundary to hit a target under the WSA. As Cross Canyon widens near the Utah state line, directional drilling becomes less efficient; rigs drilling from the mesa tops outside the WSA cannot tap reserves under the canyon bottoms as the offset angle is too great. This leads to an estimate of 30 to 40 percent reserve recovery in the lower stretches of the WSA, yet it is estimated that 70 to 80 percent of reserves could be recovered in the WSA as a whole using this drilling technique. But it cannot be assumed that directional drilling would be the method employed in all 36 leases as this method is not actually stipulated in the pre-FLPMA lease agreements.

An additional reason for the no-wilderness recommendation is that wilderness management of Cross Canyon would be made difficult by the inclusion in the WSA of several parcels of land (933 total acres) which are up on and extend away from the canyon rim on the periphery of the WSA. The wilderness inventory process identified roadless natural areas which resulted in the 12,588 acre Cross Canyon WSA. This roadless area included

several undisturbed yet flat land parcels which extend away from the canyon rims and abut roads, chainings, and cultivated fields. These parcels have a lowered wilderness quality and an increased potential for management conflicts due to sights and sounds of road traffic, the working of farm machinery, and other peripheral nonwilderness uses such as trespass firewood cutting and illegal dumping.

CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

Naturalness

The Cross Canyon WSA is predominantly natural in character with negligible human imprints. The dominant natural feature of this area is the confluence of three deep canyons (Cross, Cow, and Ruin), plus numerous small tributary canyons that have been cut by water-flow erosion into the Morrison Formation and Dakota Sandstone. The stair-step canyon slopes range in depth from 300 to 900 feet and are marked by shallow, rocky soils, numerous rock outcrops, and talus slopes. Sandstone cliffs and ledges line the canyon rims. Winding canyon bottoms support riparian vegetation including cottonwood, boxelder, Russian olive, willow, tamarisk and various shrubs. Dense pinyon pine-juniper woodland dominates the canyon sides and rim with sage and shrub understory including mormon tea, mountain mahogany, rabbitbrush, cliffrose and antelope bitterbrush.

Cross Canyon broadens as it reaches Utah and the landform gradually changes from semi-desert canyon to a large eroded basin with badland-type formations. Vegetation thins as the low eroded hills support only sparse pinyon-juniper with scattered sage, rabbitbrush and grasses. The perennial stream of Cross Canyon retains its character in these lower reaches with dense cottonwood and riparian vegetation.

Although the ecosystem of Cross WSA is in some respects similar to that of other canyons in the region, when considered in the context of the surrounding lands, these WSA canyons take on a greater ecological significance. The plain-like highlands above the canyons were once covered by expansive pinyon/juniper forests, but most of that semi-desert forest habitat has been radically modified in the last century. Nearly all of the private land in the area is now cultivated for dryland farming of beans, wheat and alfalfa. Much of the public land has been chained--the pygmy evergreen forest removed in hopes of improving the range for domestic livestock grazing. The result has been the elimination of much of the natural flora in the region. The rugged, nearly inaccessible canyons in this area however, were left untouched and constitute refuges where indigenous flora and fauna are still abundant.

In addition, the riparian communities found in the canyon bottoms play a crucial role in arid ecosystems. They provide water and cover as well as a travel corridor for animals such as mule deer, that summer in higher country but winter in the canyons. Black bear, mountain lion, coyote and bobcat also use these canyon refuges, some as home territory and others as seasonal range. The riparian plant communities also support a diversity of animals that would otherwise not exist in the area, such as shorebirds and passerine birds that nest in and migrate through the canyons.

Rocky cliffs in the canyons offer nesting sites for raptors such as red-tailed and Cooper's hawks, various owls, golden eagles and prairie falcons. Two endangered raptors, the peregrine falcon and the bald eagle, have been sighted in the WSA and, although neither nests there, it appears that falcons and wintering bald eagles do utilize habitat in the area. Cross Canyon contains potential habitat for the BLM sensitive, federal candidate species *Astragalus naturitensis* (Naturita milkvetch). A 1989 baseline biological study of Cross Canyon found a previously unidentified species of fish which was given automatic BLM special protection status. The study also confirmed that this canyon system is the northern-most example of the Upper Sonoran ecosystem as documented by the identification of the gray hawk, desert spiny lizard, western ribbon snake and the Ord's kangaroo rat.

Three vehicle ways are the only imprints of modern-man. These ways are revegetating and are screened by the surrounding pinyon-juniper woodland--they do not significantly impair the naturalness of the area.

Solitude

Topographic and vegetative screening combine to provide outstanding solitude opportunities throughout the canyons of the WSA. The mesa-top parcels of the WSA (see Recommendation and Rationale this report) are undisturbed and therefore

offer natural vegetative screening but because of the flat topography and nearness to heavily impacted areas outside the WSA, do offer a wilderness quality and solitude of lesser value than that of the canyons. In the canyon, rugged terrain, stair-stepped deep winding canyons, numerous rock outcrops, and boulder strewn slopes provide topographic screening. The dense cover of pinyon-juniper on the slopes and canyon rims plus riparian growth in the canyon bottoms provide vegetative screening. The canyon-interior configuration of this WSA gives the visitor a feeling of isolation from the sights and sounds of human activity outside the canyon.

Primitive and Unconfined Recreation

Cross Canyon WSA provides outstanding opportunities for primitive and unconfined recreation. The canyon bottoms provide routes for hiking or horseback riding; the area's geological and archaeological features and wildlife offer scenic subject matter for photography and sightseeing; the rugged canyon slopes are a challenge for climbing and rock scrambling; and hunting is a historic use. Numerous secluded camping spots are available. From a mesa or cliff-top, the panorama is of Cross Canyon itself as well as other striking landforms in the area such as the Abajo Mountains to the northwest and Sleeping Ute Mountain to the southeast. The dark green woodland and contrasting tan, gray, and black stained cliffs provide a scenic backdrop for all recreation activities.

Special Features

Even though only 6 percent of the Colorado acreage has been intensively inventoried, it is known that the area has a high archaeological site density. The area was heavily used by the Anasazi culture as it flourished from A.D. 450 to 1300 and some sites suggest that paleo-man may have roamed these canyons as early as 10,000 B.C. Anasazi pueblo habitation sites, rock shelters, cliff dwellings, great kivas, towers and water control devices are numerous. These sites are isolated from access and therefore have not yet been impacted by collectors and vandals. Also unique to the canyon because of its ruggedness and remoteness are a large number of historic Indian and European sites. Numerous outlaw and sheep camps, Navajo habitations and old homesteads can be found along the canyon bottoms and steep slopes. The interpretative and scientific potential of this canyon is as yet untapped.

In Colorado, Cross Canyon WSA is managed as a Cultural Resource Emphasis Area within the Anasazi Culture Multiple Use Area of Critical Environmental Concern (internal BLM designation, 1986). Management direction prioritizes the preservation and enhancement of the cultural resource properties found within the area. Emphasis is focused on measures needed to protect the soil, vegetation, scenic, cultural, and wildlife resources and thereby the entire cultural resource setting.

Geological formations are well exposed for scientific and educational study: the Summerville and Morrison Formations of the Jurassic Period outcrop and are overlain by Burro Canyon and Dakota Formations of the Upper Cretaceous. The Morrison is rich in fossilized wood and plant remains as well as fossil vertebrate bones. These values are important to many recreation users who note that such a combination of archaeological and educational values, scenic beauty and ruggedness can be found in few places.

Diversity in the National Wilderness Preservation System

Assessing the diversity of natural systems and features as represented by ecosystems:

Wilderness designation of this WSA would not add a new ecosystem or landform to the NWPS. The WSA is in the Colorado Plateau Province (Bailey-Kuchler classification system) and contains pinyon-juniper woodland (11,588 acres) and Great Basin sagebrush (1,000 acres) vegetative zones. The pinyon-juniper woodland ecosystem is represented by only one wilderness area in Colorado; that being in Mesa Verde National Park and closed to public recreation, and one in Utah (Box-Death Hollow). The Great Basin sagebrush ecosystem is represented by two areas in the NWPS, neither of which are in Colorado and one being partially in Utah (see Table 2).

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Pinyon-Juniper Woodland	11	1,401,745	85	2,142,602
Great Basin Sagebrush	2	95,875	5	58,421
COLORADO (COLORADO PLATEAU PROVINCE)				
Pinyon-Juniper Woodland	1	8,105	17	293,837
Great Basin Sagebrush	0	0	4	57,541

Source: BLM File Data.

Expanding the opportunities for solitude or primitive recreation within a day's driving time (5 hours) of major population centers:

The Cross Canyon WSA is not within a 5-hour drive of a major population center (Standard Metropolitan Statistical Area).

Balancing the geographic distribution of wilderness areas:

The Cross Canyon WSA would contribute to balancing the geographic distribution of areas within the NWPS. The nearest designated wilderness area (Mesa Verde National Park Wilderness; 8,105 acres) is approximately 1.5 hours to the southeast. Mesa Verde Wilderness is not open to the public due to important archaeological values. Two to 3 hours to the east of Cross is Forest Service Lizard Head (41,189 acres) and Mt. Sneffels (16,210 acres) Wilderness Areas; areas of high mountain landform and ecosystem and thereby unavailable for most public use during winter and spring. Two hours to the north is the BLM Dolores River Canyon WSA which contains 29,415 acres recommended for wilderness designation. Because of its year-round accessibility and Colorado Plateau ecosystem, Cross Canyon WSA would expand and balance opportunities to attain diverse wilderness experiences.

Manageability

(The area must be capable of being effectively managed to preserve its wilderness character.)

The Cross Canyon WSA could be effectively managed to preserve its wilderness character yet complex and expensive management problems could occur in two areas: management conflicts associated with 36 pre-FLPMA oil and gas leases and management conflicts associated with peripheral, flat-land parcels (see Recommendations and Rationale section for a complete discussion). The Cross Canyon EIS included a partial wilderness alternative which would enhance the manageability of this WSA. This alternative discussed deleting the several land parcels (933 total acres) by conforming the WSA boundary to the more easily and topographically identifiable canyon rim. This alternative also included the addition of two parcels totaling 617 acres from outside the WSA which would take advantage of natural topographic features to improve the identifiability and therefore the manageability of the south WSA boundary.

There are no other major manageability problems for resource conflicts which would result from wilderness designation. The entire WSA is BLM land; no inholdings. There are no patented mining claims within the WSA but there are 9 unpatented post-FLPMA mining claims, most likely for uranium. Since the GEM report for Cross Canyon shows only moderate favorability of uranium occurrence and no known deposits of uranium exist, and since these claims and all future claims are subject to FLPMA generated guidelines, site disturbance associated with access and development of these claims is unlikely (see the Energy and Mineral Resource Values section below). For the most part, the entire WSA is one grazing allotment with minimal acreage in three other allotments totaling 1,000 animal unit months (AUMs); however, no range improvement projects have been proposed within the WSA.

Energy and Mineral Resource Values

Cross Canyon energy and mineral resources were evaluated in GEM (Geological, Energy, and Minerals); Resource Assessment for Region 4, Colorado Plateau - submitted to BLM by Mountain States Mineral Enterprises Inc. in May 1983, and the Mineral Summaries prepared for BLM by the U.S. Geological Survey and Bureau of Mines in February, 1990. Extensive seismic testing has been done in and around the WSA; all in a non-impairing manner mostly by helicopter or on foot.

Hydrocarbons (oil, gas, carbon dioxide, helium): There are no known deposits or mineralization present in the WSA (GEM page 111-5). There is high potential that these resources could be found in the WSA, but accessibility and economic potential are unknown (GEM page 111-7). There are also no known deposits of coal in Cross Canyon. There is a low potential that coal is present with accessibility and economic potential unknown.

Energy and related minerals (uranium and vanadium): No known deposits in the WSA with a moderate potential for existence; therefore, accessibility and economic potential are unknown.

Precious and base metals (copper, gold, silver, lead, zinc): No known deposits and no potential that deposits exist.

Clays and cut sandstone: No known deposits, but a high probability that deposits exist. However, accessibility and economic potential are listed at low to moderate.

Overall, Cross Canyon WSA is considered to have limited potential for mineral discovery and development, which is reflected in the absence of actual development.

Impacts on Resources

The comparative impacts table (Table 3) summarizes the effects on pertinent resources for the three alternatives considered for this WSA.

Local Social and Economic Considerations

Designation or nondesignation of this WSA as wilderness would have negligible impacts on local economic conditions. Social factors were not considered a significant issue in the study.

Summary of WSA Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the Draft EIS were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the Draft EIS, a total of 102 comments were received which specifically addressed this WSA--59 were written and 43 were oral statements received at public hearings. In general, 97 commenters supported wilderness designation and 5 favored releasing the area for other uses (no wilderness). Specific comments by those favoring wilderness designation centered on the preservation of archaeological values (prehistoric and historic). Protection of ecological diversity and geologic beauty were also major concerns. Wildlife and saving a vanishing resource of scientific and educational value for future generations were both mentioned in several comments.

Those opposing wilderness designation were concerned that wilderness would preclude mineral development and grazing or that the area does not have wilderness characteristics.

One government agency comment specifically addressed this WSA: State of Colorado Department of Natural Resources supported wilderness designation of Cross Canyon WSA.

TABLE 3
COMPARATIVE SUMMARY OF THE IMPACTS BY ALTERNATIVE

Impact Topics	Recommendation No Action/No Wilderness	All Wilderness Alternative	Partial Wilderness Alternative
Impacts on Wilderness Values	Wilderness values would remain largely unchanged on 12,057 acres under this alternative. However, surface disturbance (51 acres) and impacts from sights and sounds (480 acres) from seismic exploration and wildcat well development would diminish the wilderness values on these 531 acres.	Wilderness designation would provide long-term protection for wilderness values on 12,588 acres. Natural and supplemental values would be maintained by the restrictions to motorized recreational use and mineral development. There would be short-term impacts on 111 acres associated with seismic work and test drilling. However, these disturbances would be reclaimed and substantially unnoticeable after 2 years. Opportunities for solitude and primitive, unconfined recreation would be maintained because the anticipated increase in visitor use associated with wilderness designation is incidental.	Under this alternative, the wilderness values in the 12,272 acres designated as suitable for wilderness would be protected. There would be short-term impacts on 243 acres associated with seismic work and test well drilling. However, these disturbances would be reclaimed and substantially unnoticeable after 2 years. Opportunities for primitive, unconfined recreation would be preserved. The wilderness values in the remaining 933 acres designated as nonsuitable would be protected by the ORV closure and 683 acres of the remaining 933 acres designated as nonsuitable would be protected by the NSO stipulation; this area is expected to remain largely unchanged over the long-term.

TABLE 3 (Continued)
COMPARATIVE SUMMARY OF THE IMPACTS BY ALTERNATIVE

Impact Topics	Recommendation No Action/No Wilderness	All Wilderness Alternative	Partial Wilderness Alternative
Impacts on Cultural Resources	Under this alternative, the cultural resources in the Colorado portion of the WSA would be protected by provisions in the ACEC plan which provide for protection of all sites and stabilization or recovery of information from 75 sites. In addition, cultural resources in this area will be protected through increased knowledge and management presence, as well as by management restrictions on motorized vehicle use and by an NSO stipulation on 9,580 acres. Cultural resources on the remaining 1,008 acres in Utah are expected to remain largely unchanged.	Under this alternative, the cultural resources in the WSA would be protected by wilderness management and by the ACEC plan which provides for protection for all sites and stabilization, or recovery of information from 75 sites. These protective measures would be further supported by the WSA-wide exclusion of motorized recreational use and by the mineral withdrawal. As such, this alternative would provide comprehensive protection for the cultural resources in the entire 12,588 acre WSA.	Under this alternative, the cultural resources in the suitable portion of the WSA (12,272 acres) would be protected by the closure to motorized recreational use and by the mineral withdrawal. As such, this alternative would provide comprehensive protection for the cultural resources in this portion of the WSA. The cultural resources in 250 acres of the portion designated as nonsuitable would also be protected by both the ACEC plan and the closure to motorized recreational use. Although the cultural resources in 683 acres of the nonsuitable portion do not have the NSO stipulations, they would continue to be protected by both the ACEC plan and the ORV closure.
Impacts on Mineral Exploration and Production	Two projected successful wells in the WSA would produce about 400 bbls of oil and 800 mcf of gas per day during the next 20 years. These wells represent 5 percent of the 40 new wells projected to be drilled and producible within Colorado's Paradox Basin in the next 20 years. It is projected that 85 percent of the recoverable reserves would be produced over time, mostly from more favorable well sites outside the WSA through directional drilling.	Although some exploration will occur, production of energy or minerals probably will not occur from within the WSA. However, it is projected that 40 percent of the recoverable reserves would be produced over time by directional drilling from outside the WSA.	Under the Partial Wilderness Alternative, even though exploration will occur, production of energy or minerals probably will not occur from within the WSA. However, it is projected that 50 percent of the recoverable reserves would be produced over time by directional drilling the pre-FLPMA leases from outside the WSA.

TABLE 3 (Continued)
COMPARATIVE SUMMARY OF THE IMPACTS BY ALTERNATIVE

Impact Topics	Recommendation No Action/No Wilderness	All Wilderness Alternative	Partial Wilderness Alternative
Impacts on Recreational Opportunities and Use	Recreational use would increase to 880 user days per year under this alternative. Excellent opportunities for most back country recreational activities would continue to exist for most of the WSA.	Under this alternative, recreational use would increase slightly over a 3 to 5 year period. However, this increase would be so incidental that it would not affect the character of recreation use in this area. Over the long-term, excellent opportunities will be preserved for non-motorized, back country recreational activities by eliminating motorized recreational use and mineral development.	Under this alternative, recreational use in the 12,272 acres determined suitable for wilderness would increase slightly over a 3 to 5 year period. However, this increase would be so incidental that it would not affect the character of recreation use in this area. Over the long-term, excellent opportunities will be preserved for non-motorized recreational use through the exclusion of motorized use and mineral development. the character of recreational use in the 933 acre area designated as nonsuitable would not change. In this area, excellent opportunities would still exist for non-motorized recreational use because of the existing closure to motorized use and restrictions on mineral development on 250 acres.

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